The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1.   A method for cutting a three-dimensional portion from a foodstuff in accordance with a predetermined shape, comprising:

scanning the foodstuff;

building a three-dimensional map of the foodstuff from the scan, the three dimensions being thickness, width and length of the foodstuff;

comparing the three-dimensional map with one or more desired predetermined shapes for one or more portions to be cut from the foodstuff;

computing one or more cutting path that would portion the foodstuff in the one or more predetermined shapes; and

cutting the foodstuff according to the computed one or more cutting paths.

2.   A method according to Claim 1, further comprising the step rescanning the foodstuff after partially cutting the foodstuff to build a renewed multi-dimensional map of the foodstuff from the rescan to determine if the foodstuff has moved during the partial cutting.

3.   A method according to Claim 2, further comprising the step of computing a second path of portioning along at least a second dimension to substantially conform to the predetermined shape and cutting the foodstuff according to the computed second path.

4.   A method according to Claim 3, wherein the computed second path of portioning includes a third dimension and cutting the foodstuff according to the computed second path.

5.   The method of Claim 4, wherein the first dimension is length, the second dimension is width, and the third dimension is length.

6.   The method of Claim 1, wherein the scanning step utilizes a technique selected from the group consisting of optical scanning, video scanning and x-ray scanning.

7.   The method of Claim 1, wherein the food product foodstuff moves on an endless belt conveyor.

8.　　The method of Claim 1, wherein the cutting step uses a high speed water jet.

9.　　The method of Claim 1, wherein the cutting step uses a rotating and oscillating cutting means.

10.　　The method of Claim 1, wherein a CPU is used for the computing step.

11.　　The method of Claim 10, wherein the CPU performs executable steps comprising a step of comparing at least one dimensional variable of a desired map with the generated three-dimensional map.

12.　　The method of Claim 1, wherein the one dimensional variable is thickness.

13.　　The method of Claim 11, wherein the one dimensional variable is width.

14.　　The method of Claim 11, wherein the one dimensional variable is length.

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